RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _____

Source:

Date Processed by STIC:

ENTERED

CRF Errors Edited by the STIC Systems Branch

| • | |
|--------|--|
| Serial | Number: 10 575, 279 CRF Edit Date: 1267 Edited by: |
| | Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line |
| | Corrected the SEQ ID NO. Sequence numbers edited were: |
| | Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: |
| | Deleted: invalid beginning/end-of-file text; page numbers |
| | Inserted mandatory headings/numeric identifiers, specifically: |
| | Moved responses to same line as heading/numeric identifier, specifically: |
| / | |
| _V_ | Other: deleted invalid Alpha Numeric headings For Prior Application Number. |



IFWO

RAW SEQUENCE LISTING DATE: 01/26/2007 PATENT APPLICATION: US/10/575,279 TIME: 09:30:36 Input Set : A:\pto.kd.txt Output Set: N:\CRF4\01262007\J575279.raw 3 <110> APPLICANT: The UAB Research Foundation Oomens, Tom 5 Megaw, Alexander Wertz, Gail 8 <120> TITLE OF INVENTION: RECOMBINANT VIRUSES WITH HETEROLOGOUS ENVELOPE PROTEINS 10 <130> FILE REFERENCE: 057909-012001 C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/575,279 C--> 12 <141> CURRENT FILING DATE: 2006-04-11 12 <150> PRIOR APPLICATION NUMBER: 60/588,379 13 <151> PRIOR FILING DATE: 2004-07-16 15 <150> PRIOR APPLICATION NUMBER: 60/528,214 16 <151> PRIOR FILING DATE: 2003-12-10 18 <150> PRIOR APPLICATION NUMBER: 10/262,238 19 <151> PRIOR FILING DATE: 2002-10-01 21 <150> PRIOR APPLICATION NUMBER: 60/397,289 22 <151> PRIOR FILING DATE: 2002-07-19 24 <150> PRIOR APPLICATION NUMBER: 60/326,259 25 <151> PRIOR FILING DATE: 2001-10-01 27 <160> NUMBER OF SEQ ID NOS: 4 29 <170> SOFTWARE: PatentIn version 3.2 31 <210> SEQ ID NO: 1 32 <211> LENGTH: 7 33 <212> TYPE: PRT 34 <213> ORGANISM: Autographa californica nucleopolyhedrovirus 36 <400> SEQUENCE: 1 38 Arg Asn Arg Asn Arg Gln Tyr 39 1 42 <210> SEQ ID NO: 2 43 <211> LENGTH: 15 44 <212> TYPE: PRT 45 <213> ORGANISM: Human respiratory syncytial virus 47 <400> SEQUENCE: 2 49 Ser Arg Arg Gln Leu Ser Gly Ile Asn Asn Ile Ala Phe Ser Asn 10 53 <210> SEQ ID NO: 3 54 <211> LENGTH: 574 55 <212> TYPE: PRT 56 <213> ORGANISM: Human respiratory syncytial virus 58 <400> SEQUENCE: 3 60 Met Glu Leu Leu Ile Leu Lys Ala Asn Ala Ile Thr Thr Ile Leu Thr 5 10

64 Ala Val Thr Phe Cys Phe Ala Ser Gly Gln Asn Ile Thr Glu Glu Phe

25

RAW SEQUENCE LISTING DATE: 01/26/2007 PATENT APPLICATION: US/10/575,279 TIME: 09:30:36

Input Set : A:\pto.kd.txt

Output Set: N:\CRF4\01262007\J575279.raw

68 Tyr Gln Ser Thr Cys Ser Ala Val Ser Lys Gly Tyr Leu Ser Ala Leu 72 Arg Thr Gly Trp Tyr Thr Ser Val Ile Thr Ile Glu Leu Ser Asn Ile 55 76 Lys Glu Asn Lys Cys Asn Gly Thr Asp Ala Lys Val Lys Leu Ile Lys 70 80 Gln Glu Leu Asp Lys Tyr Lys Asn Ala Val Thr Glu Leu Gln Leu Leu 90 84 Met Gln Ser Thr Pro Pro Thr Asn Asn Arg Ala Arg Arg Glu Leu Pro 100 105 88 Arg Phe Met Asn Tyr Thr Leu Asn Asn Ala Lys Lys Thr Asn Val Thr 89 115 120 92 Leu Ser Lys Lys Arg Lys Arg Arg Phe Leu Gly Phe Leu Gly Val 135 96 Gly Ser Ala Ile Ala Ser Gly Val Ala Val Ser Lys Val Leu His Leu 150 155 100 Glu Gly Glu Val Asn Lys Ile Lys Ser Ala Leu Leu Ser Thr Asn Lys 165 170 104 Ala Val Val Ser Leu Ser Asn Gly Val Ser Val Leu Thr Ser Lys Val 180 185 108 Leu Asp Leu Lys Asn Tyr Ile Asp Lys Gln Leu Leu Pro Ile Val Asn 195 200 205 112 Lys Gln Ser Cys Ser Ile Ser Asn Ile Glu Thr Val Ile Glu Phe Gln 210 / 215 220 116 Gln Lys Asn Asn Arg Leu Leu Glu Ile Thr Arg Glu Phe Ser Val Asn 230 235 120 Ala Gly Val Thr Thr Pro Val Ser Thr Tyr Met Leu Thr Asn Ser Glu 245 250 124 Leu Leu Ser Leu Ile Asn Asp Met Pro Ile Thr Asn Asp Gln Lys Lys 260 265 128 Leu Met Ser Asn Asn Val Gln Ile Val Arg Gln Gln Ser Tyr Ser Ile 132 Met Ser Ile Ile Lys Glu Glu Val Leu Ala Tyr Val Val Gln Leu Pro 295 136 Leu Tyr Gly Val Ile Asp Thr Pro Cys Trp Lys Leu His Thr Ser Pro 310 315 140 Leu Cys Thr Thr Asn Thr Lys Glu Gly Ser Asn Ile Cys Leu Thr Arg 325 330 144 Thr Asp Arg Gly Trp Tyr Cys Asp Asn Ala Gly Ser Val Ser Phe Phe 340 345 148 Pro Gln Ala Glu Thr Cys Lys Val Gln Ser Asn Arg Val Phe Cys Asp 360 152 Thr Met Asn Ser Leu Thr Leu Pro Ser Glu Ile Asn Leu Cys Asn Val 375 . 156 Asp Ile Phe Asn Pro Lys Tyr Asp Cys Lys Ile Met Thr Ser Lys Thr 390 395 160 Asp Val Ser Ser Ser Val Ile Thr Ser Leu Gly Ala Ile Val Ser Cys 405 410 164 Tyr Gly Lys Thr Lys Cys Thr Ala Ser Asn Lys Asn Arg Gly Ile Ile

RAW SEQUENCE LISTING DATE: 01/26/2007 PATENT APPLICATION: US/10/575,279 TIME: 09:30:36

Input Set : A:\pto.kd.txt

Output Set: N:\CRF4\01262007\J575279.raw

| 165 | | | | 420 | | | | | 425 | | | | | 430 | | |
|---|--------------------------|-------------------|-------------------|--------------------------|--------------------------|--------------------------|--------------------------|------------|-------------------|-------------------|-------------------|-------------------|------------|-------------------|-------------------|-------------------|
| 168 | Lys | Thr | Phe | Ser | Asn | Gly | Cys | Asp | Tyr | Val | Ser | Asn | Lys | Gly | Met | Asp |
| 169 | | | 435 | | | | | 440 | | | | | 445 | | | |
| 172 | Thr | Val | Ser | Val | Gly | Asn | Thr | Leu | Tyr | Tyr | Val | Asn | Lys | Gln | Glu | Gly |
| 173 | | 450 | | | | | 455 | | | | | 460 | | | | |
| 176 | Lys | Ser | Leu | Tyr | Val | Lys | Gly | Glu | Pro | Ile | Ile | Asn | Phe | Tyr | Asp | Pro |
| 177 | 465 | | | _ | | 470 | _ | | | | 475 | | | - | - | 480 |
| 180 | Leu | Val | Phe | Pro | Ser | Asp | Glu | Phe | asp | Ala | | Ile | Ser | Gln | Val | |
| 181 | | | | | 485 | | | | | 490 | | | | | 495 | |
| | | Lys | Ile | Asn | Gln | Ser | Len | Ala | Phe | | Ara | Lvs | Ser | Asn | | Len |
| 185 | | -2- | | 500 | | | | | 505 | | 5 | | | 510 | | |
| | T.e.ii | His | Δsn | | Asn | Δla | Glv | Luc | | Thr | Thr | Δen | Tla | | Tla | Thr |
| 189 | | | 515 | •41 | 11011 | 211U | OLY | 520 | OCI | 1111 | 1117 | ASII | 525 | Mec | 116 | 1111 |
| | | Ile | | Tla | Wa I | Tla | Tla | | Tlo | T 011 | T 011 | C0~ | | т1. | ת ת | 77-7 |
| 193 | | | 116 | 116 | vaı | 116 | | vai | 116 | ьец | цец | | пеп | 116 | Ата | vaı |
| | | 530 | T | T | m | a | 535 | 7.7 - | 3 | 0 | m\ | 540 | **- 7 | m1 | . | |
| | | Leu | ьeu | ьeu | Tyr | | ьys | ALA | Arg | ser | | Pro | vai | Inr. | Leu | |
| - | 545 | | ~ 7 . | _ | _ | 550 | | _ | _ | | 555 | | _ | _ | | 560 |
| | | Asp | GIn | ьeu | | GLY | шe | Asn | Asn | | Ala | Phe | Ser | Asn | | |
| 201 | | | | | 565 | | | | | 570 | | | | | | |
| | | 0 > SI | | | | | | | | | | | | | | |
| | | 1> L | | | 11 | | | | | | | | | | | |
| | | 2> T | | | | | | | | | | | | | | |
| | | 3 > OI | | | | icula | ar st | tomat | citis | s vi | cus | | | | | |
| | | 0> SI | ~ | | | | | | | | | | | | | |
| 211 | Met | Lys | Cys | Leu | Leu | Tyr | Leu | Ala | Phe | Leu | Phe | Ile | Gly | Val | Asn | Cys |
| 212 | | | | | 5 | | | | | 10 | | | | | 15 | |
| 215 | Lys | Phe | Thr | Ile | Val | Phe | Pro | His | Asn | Gln | Lys | Gly | Asn | Trp | Lys | Asn |
| 216 | | | | 20 | | | | | 25 | | | | | 30 | | |
| 219 | Val | Pro | Ser | Asn | Tyr | His | Tyr | Cys | Pro | Ser | Ser | Ser | Asp | Leu | Asn | \mathtt{Trp} |
| 220 | | | 35 | | | | | 40 | | | | | 45 | | | |
| 223 | His | Asn | Asp | Leu | Ile | Gly | Thr | Ala | Ile | Gln | Val | Lys | Met | Pro | Lys | Ser |
| 224 | | 50 | | | | | 55 | | | | | 60 | | | | |
| 227 | His | Lys | Ala | Ile | Gln | Ala | Asp | Gly | Trp | Met | Cys | His | Ala | Ser | Lys | Trp |
| 228 | 65 | | | | | 70 | | _ | - | | 75 | | | | _ | 80 |
| 231 | Val | Thr | Thr | Cys | Asp | Phe | Arg | Trp | Tyr | Gly | Pro | Lys | Tyr | Ile | Thr | Gln |
| 232 | | | | _ | 85 | | _ | _ | _ | 90 | | - | | | 95 | |
| 235 | Ser | Ile | Arq | Ser | Phe | Thr | Pro | Ser | Val | Glu | Gln | Cys | Lvs | Glu | Ser | Ile |
| 236 | | | | 100 | | | | | 105 | | | • | - | 110 | | |
| 239 | Glu | Gln | Thr | Lvs | Gln | Glv | Thr | Trp | | Asn | Pro | Glv | Phe | | Pro | Gln |
| 240 | | | 115 | | | 2 | | 120 | | | | 1 | 125 | | | |
| | | | | m | 717 | Thr | Val | | Asn | Δla | Glu | Δla | | Tle | Val | Gln |
| 244 | Ser | Cvs | Glv | IVI | | | | | | | | | | | | · |
| | Ser | | Gly | Tyr | на | | | | | | | 140 | | | | |
| 247 | | 130 | | | | | 135 | Val | Asp | Glu | ጥህ ኮ | 140 Thr | Glv | Glu | Trn | val |
| | Val | | | | | Val | 135 | Val | Asp | Glu | | | Gly | Glu | Trp | |
| 248 | Val 145 | 130 Thr | Pro | His | His | Val 150 | 135 Leu | | | | 155 | Thr | | | | 160 |
| 248 251 | Val 145 | 130 | Pro | His | His | Val 150 | 135 Leu | | | Ser | 155 | Thr | | | Pro | 160 |
| 248251252 | Val 145 Asp | 130 Thr Ser | Pro Gln | His Phe | His Ile | Val 150 Asn | 135 Leu Gly | Lys | Cys | Ser 170 | 155 Asn | Thr Tyr | Ile | Cys | Pro 175 | 160 Thr |
| 248 251 252 255 | Val 145 Asp | 130 Thr | Pro Gln | His Phe Ser | His Ile | Val 150 Asn | 135 Leu Gly | Lys | Cys Ser | Ser 170 | 155 Asn | Thr Tyr | Ile | Cys Lys | Pro 175 | 160 Thr |
| 248 251 252 255 256 | Val 145 Asp Val | 130 Thr Ser | Pro Gln Asn | His Phe Ser 180 | His Ile 165 Thr | Val 150 Asn Thr | 135 Leu Gly Trp | Lys His | Cys Ser 185 | Ser 170 Asp | 155 Asn Tyr | Thr Tyr Lys | Ile Val | Cys Lys 190 | Pro 175 Gly | 160 Thr Leu |

RAW SEQUENCE LISTING DATE: 01/26/2007 PATENT APPLICATION: US/10/575,279 TIME: 09:30:36

Input Set : A:\pto.kd.txt

Output Set: N:\CRF4\01262007\J575279.raw

| 260 | | | 195 | | | | | 200 | | | | | 205 | | | |
|-----|------------|-----|---------|------|------|----------|-----|------------|------|-------------|-------------|-------|----------|-------|-------|------|
| 263 | Gly | Glu | Leu | Ser | Ser | Leu | Gly | Lys | Glu | Gly | Thr | Gly | Phe | Arq | Ser | Asn |
| 264 | | 210 | | | | | 215 | • | | • | | 220 | | J | | |
| 267 | Tyr | Phe | Ala | Tyr | Glu | Thr | Gly | Gly | Lys | Ala | Cys | Lys | Met | Gln | Tyr | Cys |
| | 225 | | | _ | | 230 | - | - | - | | 235 | • | | | • | 240 |
| 271 | Lys | His | Trp | Gly | Val | Arg | Leu | Pro | Ser | Gly | Val | Trp | Phe | Glu | Met | Ala |
| 272 | | | | _ | 245 | _ | | | | 250 | | - | | | 255 | |
| 275 | Asp | Lys | Asp | Leu | Phe | Ala | Ala | Ala | Arg | Phe | Pro | Glu | Cys | Pro | Glu | Gly |
| 276 | | | | 260 | | | | | 265 | | | | _ | 270 | | _ |
| 279 | Ser | Ser | Ile | Ser | Ala | Pro | Ser | Gln | Thr | Ser | Val | Asp | Val | Ser | Leu | Ile |
| 280 | | | 275 | | | | | 280 | | | | | 285 | | | |
| 283 | Gln | Asp | Val | Glu | Arg | Ile | Leu | Asp | Tyr | Ser | Leu | Cys | Gln | Glu | Thr | Trp |
| 284 | | 290 | | | | | 295 | | | | | 300 | | | | |
| 287 | Ser | Lys | Ile | Arg | Ala | Gly | Leu | Pro | Ile | Ser | Pro | Val | Asp | Leu | Ser | Tyr |
| | 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| | Leu | Ala | Pro | Lys | | Pro | Gly | Thr | Gly | | Ala | Phe | Thr | Ile | Ile | Asn |
| 292 | | | | | 325 | _ | _ | | | 330 | | | | | 335 | |
| | Gly | Thr | Leu | | Tyr | Phe | Glu | Thr | _ | Tyr | Ile | Arg | Val | _ | Ile | Ala |
| 296 | | _ | | 340 | _ | _ | J | | 345 | | _ | | _ | 350 | _ | |
| | Ala | Pro | | Leu | Ser | Arg | Met | | Gly | Met | Ile | Ser | _ | Thr | Thr | Thr |
| 300 | ~1 | • | 355 | | _ | _ | _ | 360 | | _ | _ | | 365 | | | |
| | Glu | | GIU | Leu | Trp | Asp | | Trp | Ala | Pro | Tyr | | Asp | Val | Glu | Ile |
| 304 | 03 | 370 | 7 | a1 | 77 7 | T | 375 | m 1 | 0 | 0 | a1 . | 380 | | -1 | _ | _ |
| | Gly 385 | Pro | Asn | GIY | vaı | 390 | Arg | Thr | ser | ser | | ıyr | ьys | Pne | Pro | |
| | Tyr | Mot | T10 | C111 | ui c | | Mot | T 011 | 7 ~~ | Com | 395 | T 011 | 114.0 | T 011 | C 0 m | 400 |
| 312 | TYT | Mec | 116 | Gry | 405 | GIY | Met | пеп | Asp | 410 | ASP | пеп | птъ | neu | 415 | ser |
| | Lys | Δla | Gln | Val | | Glu | Hic | Pro | Hic | | Gln | λen | 7 T = | λla | | Gln |
| 316 | _,, | | | 420 | | Oru | | 110 | 425 | 110 | 0111 | ASP | ALU | 430 | DCI | GIII |
| - | Leu | Pro | Asp | | Glu | Ser | Leu | Phe | | Glv | Asp | Thr | Glv | | Ser | Lvs |
| 320 | | | 435 | | | | | 440 | | U -1 | 1105 | | 445 | | 501 | _,, |
| | Asn | Pro | | Glu | Leu | Val | Glu | | Trp | Phe | Ser | Ser | | Lvs | Ser | Ser |
| 324 | | 450 | | | | | 455 | 2 | | | | 460 | - | -1- | | |
| 327 | Ile | Ala | Ser | Phe | Phe | Phe | Ile | Ile | Gly | Leu | Ile | Ile | Gly | Leu | Phe | Leu |
| | 465 | | | | | 470 | | | - | | 475 | | • | | | 480 |
| 331 | Val | Leu | Arg | Val | Gly | Ile | His | Leu | Cys | Ile | Lys | Leu | Lys | His | Thr | Lys |
| 332 | | | | | 485 | | | | - | 490 | - | | - | | 495 | _ |
| 335 | Lys | Arg | Gln | Ile | Tyr | Thr | Asp | Ile | Glu | Met | Asn | Arg | Leu | Gly | Lys | |
| 336 | | | | 500 | | | | | 505 | | | | | 510 | | |
| | | | | | | | | | | | | | | | | |

VERIFICATION SUMMARYDATE: 01/26/2007PATENT APPLICATION: US/10/575,279TIME: 09:30:37

Input Set : A:\pto.kd.txt

Output Set: N:\CRF4\01262007\J575279.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date

Raw Sequence Listing before editing (for reference only)



IFWO

```
RAW SEQUENCE LISTING
                                                             DATE: 01/19/2007
                     PATENT APPLICATION: US/10/575,279
                                                             TIME: 16:41:43
                     Input Set : A:\Sequence Listing.ST25.txt
                     Output Set: N:\CRF4\01192007\J575279.raw
     3 <110> APPLICANT: The UAB Research Foundation
     4
              Oomens, Tom
     5
             Megaw, Alexander
             Wertz, Gail
     8 <120> TITLE OF INVENTION: RECOMBINANT VIRUSES WITH HETEROLOGOUS ENVELOPE PROTEINS
    10 <130> FILE REFERENCE: 057909-012001
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/575,279
C--> 12 <141> CURRENT FILING DATE: 2006-04-11
    12 <150> PRIOR APPLICATION NUMBER: (U.S. Provisional Patent Application Serial No
60/588,379
    13 <151> PRIOR FILING DATE: 2004-07-16
    15 <150> PRIOR APPLICATION NUMBER: O.S. Provisional Patent Application Serial No
60/528,214
    16 <151> PRIOR FILING DATE: 2003-12-10
    18 <150> PRIOR APPLICATION NUMBER: U.S. Patent Application
    19 <151> PRIOR FILING DATE: 2002-10-01
    21 <150> PRIOR APPLICATION NUMBER: (U.S. Provisional Patent Application
    22 <151> PRIOR FILING DATE: 2002-07-19 __
    24 <150> PRIOR APPLICATION NUMBER: (U.S. Provisional Patent Application Serial No
60/326,259
    25 <151> PRIOR FILING DATE: 2001-10-01
    27 <160> NUMBER OF SEQ ID NOS: 4
    29 <170> SOFTWARE: PatentIn version 3.2
    31 <210> SEO ID NO: 1
    32 <211> LENGTH: 7
    33 <212> TYPE: PRT
    34 <213> ORGANISM: Autographa californica nucleopolyhedrovirus
    36 <400> SEQUENCE: 1
    38 Arg Asn Arg Asn Arg Gln Tyr
    42 <210> SEQ ID NO: 2
    43 <211> LENGTH: 15
    44 <212> TYPE: PRT
    45 <213> ORGANISM: Human respiratory syncytial virus
    47 <400> SEQUENCE: 2
    49 Ser Arg Arg Gln Leu Ser Gly Ile Asn Asn Ile Ala Phe Ser Asn
    50 1
    53 <210> SEQ ID NO: 3
    54 <211> LENGTH: 574
    55 <212> TYPE: PRT
    56 <213> ORGANISM: Human respiratory syncytial virus
    58 <400> SEQUENCE: 3
```

60 Met Glu Leu Leu Ile Leu Lys Ala Asn Ala Ile Thr Thr Ile Leu Thr

61 1 5 10 15 64 Ala Val Thr Phe Cys Phe Ala Ser Gly Gln Asn Ile Thr Glu Glu Phe 65 20 25 30 RAW SEQUENCE LISTING DATE: 01/19/2007 PATENT APPLICATION: US/10/575,279 TIME: 16:41:43

Input Set : A:\Sequence Listing.ST25.txt
Output Set: N:\CRF4\01192007\J575279.raw

68 Tyr Gln Ser Thr Cys Ser Ala Val Ser Lys Gly Tyr Leu Ser Ala Leu 72 Arg Thr Gly Trp Tyr Thr Ser Val Ile Thr Ile Glu Leu Ser Asn Ile 76 Lys Glu Asn Lys Cys Asn Gly Thr Asp Ala Lys Val Lys Leu Ile Lys 80 Gln Glu Leu Asp Lys Tyr Lys Asn Ala Val Thr Glu Leu Gln Leu Leu 85 84 Met Gln Ser Thr Pro Pro Thr Asn Asn Arg Ala Arg Arg Glu Leu Pro 100 105 88 Arg Phe Met Asn Tyr Thr Leu Asn Asn Ala Lys Lys Thr Asn Val Thr 120 92 Leu Ser Lys Lys Arg Lys Arg Phe Leu Gly Phe Leu Leu Gly Val 130 135 140 96 Gly Ser Ala Ile Ala Ser Gly Val Ala Val Ser Lys Val Leu His Leu 100 Glu Gly Glu Val Asn Lys Ile Lys Ser Ala Leu Leu Ser Thr Asn Lys 165 170 104 Ala Val Val Ser Leu Ser Asn Gly Val Ser Val Leu Thr Ser Lys Val 185 108 Leu Asp Leu Lys Asn Tyr Ile Asp Lys Gln Leu Leu Pro Ile Val Asn 195 200 112 Lys Gln Ser Cys Ser Ile Ser Asn Ile Glu Thr Val Ile Glu Phe Gln 215 220 116 Gln Lys Asn Asn Arg Leu Leu Glu Ile Thr Arg Glu Phe Ser Val Asn 230 235 120 Ala Gly Val Thr Thr Pro Val Ser Thr Tyr Met Leu Thr Asn Ser Glu 245 250 124 Leu Leu Ser Leu Ile Asn Asp Met Pro Ile Thr Asn Asp Gln Lys Lys . 260 265 128 Leu Met Ser Asn Asn Val Gln Ile Val Arg Gln Gln Ser Tyr Ser Ile 280 132 Met Ser Ile Ile Lys Glu Glu Val Leu Ala Tyr Val Val Gln Leu Pro 295 136 Leu Tyr Gly Val Ile Asp Thr Pro Cys Trp Lys Leu His Thr Ser Pro 137 305 310 315 140 Leu Cys Thr Thr Asn Thr Lys Glu Gly Ser Asn Ile Cys Leu Thr Arg 325 330 144 Thr Asp Arg Gly Trp Tyr Cys Asp Asn Ala Gly Ser Val Ser Phe Phe 340 345 148 Pro Gln Ala Glu Thr Cys Lys Val Gln Ser Asn Arg Val Phe Cys Asp 355 360 152 Thr Met Asn Ser Leu Thr Leu Pro Ser Glu Ile Asn Leu Cys Asn Val 375 156 Asp Ile Phe Asn Pro Lys Tyr Asp Cys Lys Ile Met Thr Ser Lys Thr 390 395 160 Asp Val Ser Ser Ser Val Ile Thr Ser Leu Gly Ala Ile Val Ser Cys 410 164 Tyr Gly Lys Thr Lys Cys Thr Ala Ser Asn Lys Asn Arg Gly Ile Ile

RAW SEQUENCE LISTING DATE: 01/19/2007 PATENT APPLICATION: US/10/575,279 TIME: 16:41:43

Input Set : A:\Sequence Listing.ST25.txt
Output Set: N:\CRF4\01192007\J575279.raw

| 165 | | | | 420 | | | | | 425 | | | | | 430 | | |
|---|---|--|--|--|--|---|--|---|--|---|--|--|--|--|--|--|
| | Tira | Πb∞ | Dho | | A cm | C1 | C*** | N an | | 17-1 | 000 | 7 ~~ | T | | Mot | 7.00 |
| | цўS | TIIL | 435 | ser | ASII | GIY | Cys | Asp 440 | ıyı | val | ser | ASII | - | GLY | Mec | Asp |
| 169 | mb | 77 T | | 17- 1 | a 1 | 3 | Ωla sa | | т | m | 77- 7 | 7 | 445 | ~1 | ~1 | 01 |
| | Tnr | | ser | vaı | GIA | Asn | | Leu | ıyr | Tyr | vai | | ьys | GIN | GIU | GIY |
| 173 | _ | 450 | _ | _ | | _ | 455 | | _ | | | 460 | | _ | _ | _ |
| | _ | Ser | Leu | Tyr | Val | _ | GIĀ | Glu | Pro | Ile | | Asn | Phe | Tyr | Asp | Pro |
| | 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| 180 | Leu | Val | Phe | Pro | Ser | Asp | Glu | Phe | Asp | Ala | Ser | Ile | Ser | Gln | Val | Asn |
| 181 | | | | | 485 | | | | | 490 | | | | | 495 | |
| 184 | Glu | Lys | Ile | Asn | Gln | Ser | Leu | Ala | Phe | Ile | Arg | Lys | Ser | Asp | Glu | Leu |
| 185 | | | | 500 | | | | | 505 | | | | | 510 | | |
| 188 | Leu | His | Asn | Val | Asn | Ala | Gly | Lys | Ser | Thr | Thr | Asn | Ile | Met | Ile | Thr |
| 189 | | | 515 | | | | | 520 | | | | | 525 | | | |
| 192 | Thr | Ile | Ile | Ile | Val | Ile | Ile | Val | Ile | Leu | Leu | Ser | Leu | Ile | Ala | Val |
| 193 | | 530 | | | | | 535 | | | | | 540 | | | | |
| 196 | Gly | Leu | Leu | Leu | Tyr | Cys | Lys | Ala | Arg | Ser | Thr | Pro | Val | Thr | Leu | Ser |
| | 545 | | | | _ | 550 | - | | - | | 555 | | | | | 560 |
| 200 | Lys | Asp | Gln | Leu | Ser | Gly | Ile | Asn | Asn | Ile | Ala | Phe | Ser | Asn | | |
| 201 | | • | | | 565 | | | | | 570 | | | | | | |
| 204 | <210 |)> SI | EQ II | O NO: | : 4 | | | | | | | | | | | |
| | | | ENGTI | | | | | | | | | | | | | |
| | | | PE: | | | | | | | | | | | | | |
| | | | | | Vesi | icula | ar st | comat | itis | s vii | cus | | | | | |
| | | | EQUE | | | | | | | | | | | | | |
| | | | - 2, | | _ | | | | | | | | | | | |
| 211 | Met | Lvs | Cvs | Leu | Leu | Tvr | Leu | Ala | Phe | Leu | Phe | Ile | Glv | Val | Asn | Cvs |
| | | Lys | Cys | Leu | Leu 5 | Tyr | Leu | Ala | Phe | | Phe | Ile | Gly | Val | | Cys |
| 212 | 1 | _ | | | 5 | | | | | 10 | | | _ | | 15 | _ |
| 212 215 | 1 | _ | | Ile | 5 | | | Ala His | Asn | 10 | | | _ | Trp | 15 | _ |
| 212 215 216 | 1 Lys | Phe | Thr | Ile 20 | 5 Val | Phe | Pro | His | Asn 25 | 10 Gln | Lys | Gly | Asn | Trp | 15 Lys | Asn |
| 212 215 216 219 | 1 Lys | Phe | Thr Ser | Ile 20 | 5 Val | Phe | Pro | His Cys | Asn 25 | 10 Gln | Lys | Gly | Asn Asp | Trp | 15 Lys | Asn |
| 212 215 216 219 220 | 1 Lys Val | Phe Pro | Thr Ser 35 | Ile 20 Asn | 5 Val Tyr | Phe His | Pro Tyr | His Cys 40 | Asn 25 Pro | 10 Gln Ser | Lys Ser | Gly Ser | Asn Asp 45 | Trp 30 Leu | 15 Lys Asn | Asn Trp |
| 212 215 216 219 220 223 | 1 Lys Val | Phe Pro Asn | Thr Ser 35 | Ile 20 Asn | 5 Val Tyr | Phe His | Pro Tyr Thr | His Cys | Asn 25 Pro | 10 Gln Ser | Lys Ser | Gly Ser Lys | Asn Asp 45 | Trp 30 Leu | 15 Lys Asn | Asn Trp |
| 212 215 216 219 220 223 224 | 1 Lys Val His | Phe Pro Asn 50 | Thr Ser 35 Asp | Ile 20 Asn Leu | 5 Val Tyr Ile | Phe His Gly | Pro Tyr Thr 55 | His Cys 40 Ala | Asn 25 Pro Ile | 10 Gln Ser Gln | Lys Ser Val | Gly Ser Lys 60 | Asn Asp 45 Met | Trp 30 Leu Pro | 15 Lys Asn Lys | Asn Trp Ser |
| 212 215 216 219 220 223 224 227 | 1 Lys Val His | Phe Pro Asn 50 | Thr Ser 35 Asp | Ile 20 Asn Leu | 5 Val Tyr Ile | Phe His Gly Ala | Pro Tyr Thr 55 | His Cys 40 | Asn 25 Pro Ile | 10 Gln Ser Gln | Lys Ser Val Cys | Gly Ser Lys 60 | Asn Asp 45 Met | Trp 30 Leu Pro | 15 Lys Asn Lys | Asn Trp Ser Trp |
| 212 215 216 219 220 223 224 227 228 | l Lys Val His 65 | Phe Pro Asn 50 Lys | Thr Ser 35 Asp | Ile 20 Asn Leu Ile | 5 Val Tyr Ile Gln | Phe His Gly Ala 70 | Pro Tyr Thr 55 Asp | His Cys 40 Ala Gly | Asn 25 Pro Ile Trp | 10 Gln Ser Gln Met | Lys Ser Val Cys 75 | Gly Ser Lys 60 His | Asn Asp 45 Met Ala | Trp 30 Leu Pro Ser | 15 Lys Asn Lys Lys | Asn Trp Ser Trp 80 |
| 212 215 216 219 220 223 224 227 228 231 | l Lys Val His 65 | Phe Pro Asn 50 Lys | Thr Ser 35 Asp | Ile 20 Asn Leu Ile | 5 Val Tyr Ile Gln Asp | Phe His Gly Ala 70 | Pro Tyr Thr 55 Asp | His Cys 40 Ala | Asn 25 Pro Ile Trp | 10 Gln Ser Gln Met | Lys Ser Val Cys 75 | Gly Ser Lys 60 His | Asn Asp 45 Met Ala | Trp 30 Leu Pro Ser | 15 Lys Asn Lys Lys Thr | Asn Trp Ser Trp 80 |
| 212 215 216 219 220 223 224 227 228 231 232 | 1 Lys Val His 65 Val | Phe Pro Asn 50 Lys | Thr Ser 35 Asp Ala Thr | Ile 20 Asn Leu Ile Cys | 5 Val Tyr Ile Gln Asp 85 | Phe His Gly Ala 70 Phe | Pro Tyr Thr 55 Asp | His Cys 40 Ala Gly | Asn 25 Pro Ile Trp | 10 Gln Ser Gln Met Gly 90 | Lys Ser Val Cys 75 Pro | Gly Ser Lys 60 His | Asn Asp 45 Met Ala Tyr | Trp 30 Leu Pro Ser Ile | 15 Lys Asn Lys Lys Thr 95 | Asn Trp Ser Trp 80 Gln |
| 212 215 216 219 220 223 224 227 228 231 232 235 | 1 Lys Val His 65 Val | Phe Pro Asn 50 Lys | Thr Ser 35 Asp Ala Thr | Ile 20 Asn Leu Ile Cys Ser | 5 Val Tyr Ile Gln Asp 85 | Phe His Gly Ala 70 Phe | Pro Tyr Thr 55 Asp | His Cys 40 Ala Gly | Asn 25 Pro Ile Trp Tyr | 10 Gln Ser Gln Met Gly 90 | Lys Ser Val Cys 75 Pro | Gly Ser Lys 60 His | Asn Asp 45 Met Ala Tyr | Trp 30 Leu Pro Ser Ile Glu | 15 Lys Asn Lys Lys Thr 95 | Asn Trp Ser Trp 80 Gln |
| 212 215 216 219 220 223 224 227 228 231 232 235 236 | l Lys Val His 65 Val | Phe Pro Asn 50 Lys Thr | Thr Ser 35 Asp Ala Thr | Ile 20 Asn Leu Ile Cys Ser 100 | 5 Val Tyr Ile Gln Asp 85 Phe | Phe His Gly Ala 70 Phe Thr | Pro Tyr Thr 55 Asp Arg | His Cys 40 Ala Gly Trp Ser | Asn 25 Pro Ile Trp Tyr Val 105 | 10 Gln Ser Gln Met Gly 90 Glu | Lys Ser Val Cys 75 Pro | Gly Ser Lys 60 His Lys | Asn Asp 45 Met Ala Tyr Lys | Trp 30 Leu Pro Ser Ile Glu 110 | 15 Lys Asn Lys Lys Thr 95 Ser | Asn Trp Ser Trp 80 Gln Ile |
| 212 215 216 219 220 223 224 227 228 231 232 235 236 239 | l Lys Val His 65 Val | Phe Pro Asn 50 Lys Thr | Thr Ser 35 Asp Ala Thr Arg | Ile 20 Asn Leu Ile Cys Ser 100 | 5 Val Tyr Ile Gln Asp 85 Phe | Phe His Gly Ala 70 Phe Thr | Pro Tyr Thr 55 Asp Arg | His Cys 40 Ala Gly Trp Ser Trp | Asn 25 Pro Ile Trp Tyr Val 105 | 10 Gln Ser Gln Met Gly 90 Glu | Lys Ser Val Cys 75 Pro | Gly Ser Lys 60 His Lys | Asn Asp 45 Met Ala Tyr Lys Phe | Trp 30 Leu Pro Ser Ile Glu 110 | 15 Lys Asn Lys Lys Thr 95 Ser | Asn Trp Ser Trp 80 Gln Ile |
| 212 215 216 219 220 223 224 227 228 231 232 235 236 239 240 | l Lys Val His 65 Val Ser | Phe Pro Asn 50 Lys Thr Ile Gln | Thr Ser 35 Asp Ala Thr Arg Thr 115 | Ile 20 Asn Leu Ile Cys Ser 100 Lys | 5 Val Tyr Ile Gln Asp 85 Phe Gln | Phe His Gly Ala 70 Phe Thr | Pro Tyr Thr 55 Asp Arg Pro Thr | His Cys 40 Ala Gly Trp Ser Trp 120 | Asn 25 Pro Ile Trp Tyr Val 105 Leu | 10 Gln Ser Gln Met Gly 90 Glu Asn | Lys Ser Val Cys 75 Pro Gln Pro | Gly Ser Lys 60 His Cys Cys | Asn Asp 45 Met Ala Tyr Lys Phe 125 | Trp 30 Leu Pro Ser Ile Glu 110 Pro | 15 Lys Asn Lys Lys Thr 95 Ser | Asn Trp Ser Trp 80 Gln Ile Gln |
| 212 215 216 219 220 223 224 227 228 231 232 235 236 239 240 243 | l Lys Val His 65 Val Ser | Phe Pro Asn 50 Lys Thr Ile Gln Cys | Thr Ser 35 Asp Ala Thr Arg Thr 115 | Ile 20 Asn Leu Ile Cys Ser 100 Lys | 5 Val Tyr Ile Gln Asp 85 Phe Gln | Phe His Gly Ala 70 Phe Thr | Pro Tyr Thr 55 Asp Arg Pro Thr Val | His Cys 40 Ala Gly Trp Ser Trp | Asn 25 Pro Ile Trp Tyr Val 105 Leu | 10 Gln Ser Gln Met Gly 90 Glu Asn | Lys Ser Val Cys 75 Pro Gln Pro | Gly Ser Lys 60 His Cys Cys Gly Ala | Asn Asp 45 Met Ala Tyr Lys Phe 125 | Trp 30 Leu Pro Ser Ile Glu 110 Pro | 15 Lys Asn Lys Lys Thr 95 Ser | Asn Trp Ser Trp 80 Gln Ile Gln |
| 212 215 216 219 220 223 224 227 228 231 232 235 236 239 240 243 244 | l Lys Val His 65 Val Ser Glu Ser | Phe Pro Asn 50 Lys Thr Ile Gln Cys 130 | Thr Ser 35 Asp Ala Thr Arg Thr 115 Gly | Ile 20 Asn Leu Ile Cys Ser 100 Lys | Val Tyr Ile Gln Asp 85 Phe Gln Ala | Phe His Gly Ala 70 Phe Thr Gly | Pro Tyr Thr 55 Asp Arg Pro Thr Val 135 | His Cys 40 Ala Gly Trp Ser Trp 120 Thr | Asn 25 Pro Ile Trp Tyr Val 105 Leu Asp | 10 Gln Ser Gln Met Gly 90 Glu Asn Ala | Lys Ser Val Cys 75 Pro Gln Pro Glu | Gly Ser Lys 60 His Cys Gly Ala 140 | Asn Asp 45 Met Ala Tyr Lys Phe 125 Val | Trp 30 Leu Pro Ser Ile Glu 110 Pro | 15 Lys Asn Lys Lys Thr 95 Ser Pro | Asn Trp Ser Trp 80 Gln Ile Gln Gln |
| 212 215 216 219 220 223 224 227 228 231 232 235 236 239 240 243 244 247 | l Lys Val His 65 Val Ser Glu Ser | Phe Pro Asn 50 Lys Thr Ile Gln Cys 130 | Thr Ser 35 Asp Ala Thr Arg Thr 115 Gly | Ile 20 Asn Leu Ile Cys Ser 100 Lys | Val Tyr Ile Gln Asp 85 Phe Gln Ala | Phe His Gly Ala 70 Phe Thr Gly Thr | Pro Tyr Thr 55 Asp Arg Pro Thr Val 135 | His Cys 40 Ala Gly Trp Ser Trp 120 | Asn 25 Pro Ile Trp Tyr Val 105 Leu Asp | 10 Gln Ser Gln Met Gly 90 Glu Asn Ala | Lys Ser Val Cys 75 Pro Gln Pro Glu Tyr | Gly Ser Lys 60 His Cys Gly Ala 140 | Asn Asp 45 Met Ala Tyr Lys Phe 125 Val | Trp 30 Leu Pro Ser Ile Glu 110 Pro | 15 Lys Asn Lys Lys Thr 95 Ser Pro | Asn Trp Ser Trp 80 Gln Ile Gln Gln Val |
| 212 215 216 219 220 223 224 227 228 231 232 235 236 239 240 243 244 247 248 | l Lys Val His 65 Val Ser Glu Ser Val 145 | Phe Pro Asn 50 Lys Thr Ile Gln Cys 130 Thr | Thr Ser 35 Asp Ala Thr Arg Thr 115 Gly Pro | Ile 20 Asn Leu Ile Cys Ser 100 Lys Tyr His | Val Tyr Ile Gln Asp 85 Phe Gln Ala | Phe His Gly Ala 70 Phe Thr Gly Thr | Pro Tyr Thr 55 Asp Arg Pro Thr Val 135 Leu | His Cys 40 Ala Gly Trp Ser Trp 120 Thr | Asn 25 Pro Ile Trp Tyr Val 105 Leu Asp | 10 Gln Ser Gln Met Gly 90 Glu Asn Ala Glu | Lys Ser Val Cys 75 Pro Gln Pro Glu Tyr 155 | Gly Ser Lys 60 His Lys Cys Gly Ala 140 Thr | Asn Asp 45 Met Ala Tyr Lys Phe 125 Val Gly | Trp 30 Leu Pro Ser Ile Glu 110 Pro Ile Glu | 15 Lys Asn Lys Lys Thr 95 Ser Pro Val | Asn Trp Ser Trp 80 Gln Ile Gln Gln Val 160 |
| 212 215 216 219 220 223 224 227 228 231 232 235 236 239 240 243 244 247 248 251 | l Lys Val His 65 Val Ser Glu Ser Val 145 | Phe Pro Asn 50 Lys Thr Ile Gln Cys 130 Thr | Thr Ser 35 Asp Ala Thr Arg Thr 115 Gly Pro | Ile 20 Asn Leu Ile Cys Ser 100 Lys Tyr His | S Val Tyr Ile Gln Asp 85 Phe Gln Ala His | Phe His Gly Ala 70 Phe Thr Gly Thr | Pro Tyr Thr 55 Asp Arg Pro Thr Val 135 Leu | His Cys 40 Ala Gly Trp Ser Trp 120 Thr | Asn 25 Pro Ile Trp Tyr Val 105 Leu Asp | 10 Gln Ser Gln Met Gly 90 Glu Asn Ala Glu Ser | Lys Ser Val Cys 75 Pro Gln Pro Glu Tyr 155 | Gly Ser Lys 60 His Lys Cys Gly Ala 140 Thr | Asn Asp 45 Met Ala Tyr Lys Phe 125 Val Gly | Trp 30 Leu Pro Ser Ile Glu 110 Pro Ile Glu | 15 Lys Asn Lys Lys Thr 95 Ser Pro Val Trp | Asn Trp Ser Trp 80 Gln Ile Gln Gln Val 160 |
| 212 215 216 219 220 223 224 227 228 231 232 235 240 243 244 247 248 251 252 | l Lys Val His 65 Val Ser Glu Ser Val 145 Asp | Phe Pro Asn 50 Lys Thr Ile Gln Cys 130 Thr | Thr Ser 35 Asp Ala Thr Arg Thr 115 Gly Pro Gln | Ile 20 Asn Leu Ile Cys Ser 100 Lys Tyr His | S Val Tyr Ile Gln Asp 85 Phe Gln Ala His Ile 165 | Phe His Gly Ala 70 Phe Thr Gly Thr Val 150 Asn | Pro Tyr Thr 55 Asp Arg Pro Thr Val 135 Leu Gly | His Cys 40 Ala Gly Trp Ser Trp 120 Thr Val | Asn 25 Pro Ile Trp Tyr Val 105 Leu Asp Asp | 10 Gln Ser Gln Met Gly 90 Glu Asn Ala Glu Ser 170 | Lys Ser Val Cys 75 Pro Gln Pro Glu Tyr 155 Asn | Gly Ser Lys 60 His Lys Cys Gly Ala 140 Thr | Asn Asp 45 Met Ala Tyr Lys Phe 125 Val Gly Ile | Trp 30 Leu Pro Ser Ile Glu 110 Pro Ile Glu Cys | 15 Lys Asn Lys Lys Thr 95 Ser Pro Val Trp | Asn Trp Ser Trp 80 Gln Ile Gln Gln Val 160 Thr |
| 212 215 216 219 220 223 224 227 228 231 232 235 240 243 244 247 248 251 252 255 | l Lys Val His 65 Val Ser Glu Ser Val 145 Asp | Phe Pro Asn 50 Lys Thr Ile Gln Cys 130 Thr | Thr Ser 35 Asp Ala Thr Arg Thr 115 Gly Pro Gln | Ile 20 Asn Leu Ile Cys Ser 100 Lys Tyr His Phe Ser | S Val Tyr Ile Gln Asp 85 Phe Gln Ala His Ile 165 | Phe His Gly Ala 70 Phe Thr Gly Thr Val 150 Asn | Pro Tyr Thr 55 Asp Arg Pro Thr Val 135 Leu Gly | His Cys 40 Ala Gly Trp Ser Trp 120 Thr | Asn 25 Pro Ile Trp Tyr Val 105 Leu Asp Asp Cys Ser | 10 Gln Ser Gln Met Gly 90 Glu Asn Ala Glu Ser 170 | Lys Ser Val Cys 75 Pro Gln Pro Glu Tyr 155 Asn | Gly Ser Lys 60 His Lys Cys Gly Ala 140 Thr | Asn Asp 45 Met Ala Tyr Lys Phe 125 Val Gly Ile | Trp 30 Leu Pro Ser Ile Glu 110 Pro Ile Glu Cys Lys | 15 Lys Asn Lys Lys Thr 95 Ser Pro Val Trp | Asn Trp Ser Trp 80 Gln Ile Gln Gln Val 160 Thr |
| 212 215 216 219 220 223 224 227 228 231 232 235 240 243 244 247 248 251 252 255 256 | l Lys Val His 65 Val Ser Glu Ser Val 145 Asp | Phe Pro Asn 50 Lys Thr Ile Gln Cys 130 Thr Ser His | Thr Ser 35 Asp Ala Thr Arg Thr 115 Gly Pro Gln Asn | Ile 20 Asn Leu Ile Cys Ser 100 Lys Tyr His Phe Ser 180 | Val Tyr Ile Gln Asp 85 Phe Gln Ala His Ile 165 Thr | Phe His Gly Ala 70 Phe Thr Gly Thr Val 150 Asn | Pro Tyr Thr 55 Asp Arg Pro Thr Val 135 Leu Gly Trp | His Cys 40 Ala Gly Trp Ser Trp 120 Thr Val | Asn 25 Pro Ile Trp Tyr Val 105 Leu Asp Cys Ser 185 | 10 Gln Ser Gln Met Gly 90 Glu Asn Ala Glu Ser 170 Asp | Lys Ser Val Cys 75 Pro Gln Pro Glu Tyr 155 Asn | Gly Ser Lys 60 His Lys Cys Gly Ala 140 Thr Tyr Lys | Asn Asp 45 Met Ala Tyr Lys Phe 125 Val Gly Ile Val | Trp 30 Leu Pro Ser Ile Glu 110 Pro Ile Glu Cys Lys 190 | 15 Lys Asn Lys Lys Thr 95 Ser Pro Val Trp Pro 175 Gly | Asn Trp Ser Trp 80 Gln Ile Gln Val 160 Thr |

RAW SEQUENCE LISTING DATE: 01/19/2007
PATENT APPLICATION: US/10/575,279 TIME: 16:41:43

Input Set : A:\Sequence Listing.ST25.txt
Output Set: N:\CRF4\01192007\J575279.raw

| 260 | | | 195 | | | | | 200 | | | | | 205 | | | |
|-----|------------|-----|------|------|-----|-----|-------|----------------|------|-----|-------|-----|--------|-----|------|------|
| 263 | Gly | Glu | Leu | Ser | Ser | Leu | Gly | Lys | Glu | Gly | Thr | Gly | Phe | Arg | Ser | Asn |
| 264 | | 210 | | | | | 215 | | | | | 220 | | | | |
| | | Phe | Ala | Tyr | Glu | | Gly | Gly | Lys | Ala | Cys | Lys | Met | Gln | Tyr | Cys |
| | 225 | • | | _ | _ | 230 | | | | | 235 | | | | | 240 |
| | Lys | His | Trp | Gly | | Arg | Leu | Pro | Ser | - | Val | Trp | Phe | Glu | | Ala |
| 272 | 7 | T | 3 | • | 245 | | | | _ | 250 | _ | ~ 7 | _ | _ | 255 | |
| 275 | Asp | ьys | Asp | | Pne | Ala | Ala | Ala | _ | Phe | Pro | Glu | Cys | Pro | Glu | Gly |
| | C0* | Cox | Tla | 260 | 71. | Dwa | C === | ~1 | 265 | 0 | **- 1 | 7 | *** | 270 | T | T1 - |
| 280 | ser | ser | 275 | ser | Ala | PIO | ser | 280 | THE | ser | vaı | Asp | 285 | Ser | Leu | iie |
| | Gln | Δsn | | Glu | Ara | Tla | T.011 | | Туг | Sar | T.011 | Cvc | | Glu | Thr | Trn |
| 284 | 0111 | 290 | Val | Gru | n 9 | 116 | 295 | тэр | TYL | Ser | Бец | 300 | GIII | GIU | 1111 | тър |
| | Ser | | Ile | Ara | Ala | Glv | | Pro | Ile | Ser | Pro | | Asp | Leu | Ser | Tvr |
| | 305 | | | 5 | | 310 | | | | | 315 | | | | | 320 |
| 291 | Leu | Ala | Pro | Lys | Asn | Pro | Gly | Thr | Gly | Pro | Ala | Phe | Thr | Ile | Ile | Asn |
| 292 | | | • | _ | 325 | | • | | | 330 | | | | | 335 | |
| 295 | Gly | Thr | Leu | Lys | Tyr | Phe | Glu | Thr | Arg | Tyr | Ile | Arg | Val | Asp | Ile | Ala |
| 296 | | | | 340 | | | | | 345 | | | | | 350 | | |
| | Ala | Pro | Ile | Leu | Ser | Arg | Met | Val | Gly | Met | Ile | Ser | Gly | Thr | Thr | Thr |
| 300 | | | 355 | | | | | 360 | | | | | 365 | | | |
| | Glu | | Glu | Leu | Trp | Asp | | Trp | Ala | Pro | Tyr | | Asp | Val | Glu | Ile |
| 304 | ~ 3 | 370 | | ~3 | | _ | 375 | _, | _ | _ | | 380 | _ | | _ | _ |
| | | Pro | Asn | GIĀ | vai | | Arg | Thr | Ser | Ser | | Tyr | Lys | Phe | Pro | |
| | 385 | Mat | Tla | Clv | uic | 390 | Mot | T 011 | 7 ~~ | Com | 395 | T 0 | TT = ~ | T 0 | C | 400 |
| 312 | ıyı | Mec | 116 | GIY | 405 | Gry | Mec | пец | Asp | 410 | Asp | пеп | HIS | Leu | 415 | ser |
| | Lvs | Δla | Gln | Val. | | Glu | Hig | Pro | Hic | | Gln | Δen | Δla | Ala | | Gln |
| 316 | _,_ | | 0111 | 420 | | O1u | | 110 | 425 | 110 | GIII | тър | лια | 430 | Ser | GIII |
| | Leu | Pro | Asp | | Glu | Ser | Leu | Phe | | Glv | Asp | Thr | Glv | Leu | Ser | Lvs |
| 320 | | | 435 | - | | | | 440 | | 1 | | | 445 | | | -1- |
| 323 | Asn | Pro | Ile | Glu | Leu | Val | Glu | Gly | Trp | Phe | Ser | Ser | Trp | Lys | Ser | Ser |
| 324 | | 450 | | | | | 455 | _ | - | | | 460 | _ | _ | | |
| 327 | Ile | Ala | Ser | Phe | Phe | Phe | Ile | Ile | Gly | Leu | Ile | Ile | Gly | Leu | Phe | Leu |
| 328 | | | • | | | 470 | | | | | 475 | | | | | 480 |
| | Val | Leu | Arg | Val | _ | Ile | His | Leu | Cys | | Lys | Leu | Lys | His | | Lys |
| 332 | _ | | | | 485 | | | | | 490 | Δ | | | 1 | 495 | |
| | Lys | Arg | Gln | | Tyr | Thr | Asp | Ile | | Met | Asn | Arg | Leu | Gly | Lys | |
| 336 | | | | 500 | | | | | 505 | | | | | 510 | | |

DATE: 01/19/2007

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/575,279 TIME: 16:41:44

Input Set : A:\Sequence Listing.ST25.txt Output Set: N:\CRF4\01192007\J575279.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date